FIG. 1

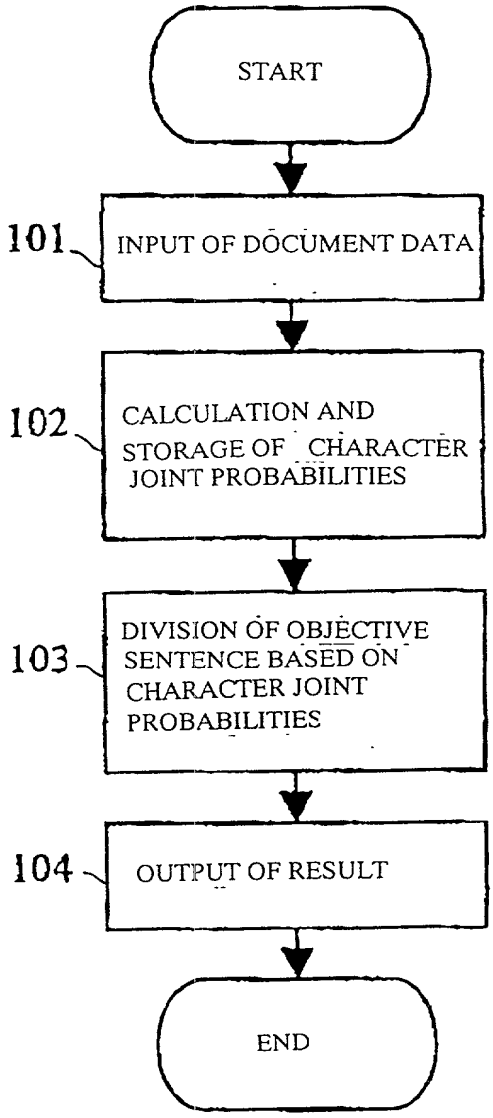
START
101
INPUT OF DOCUMENT DATA
102
CALCULATION AND STORAGE OF CHARACTER JOINT PROBABILITIES
103
DIVISION OF OBJECTIVE SENTENCE BASED ON CHARACTER JOINT PROBABILITIES
104
OUTPUT OF RESULT
END

FIG. 2

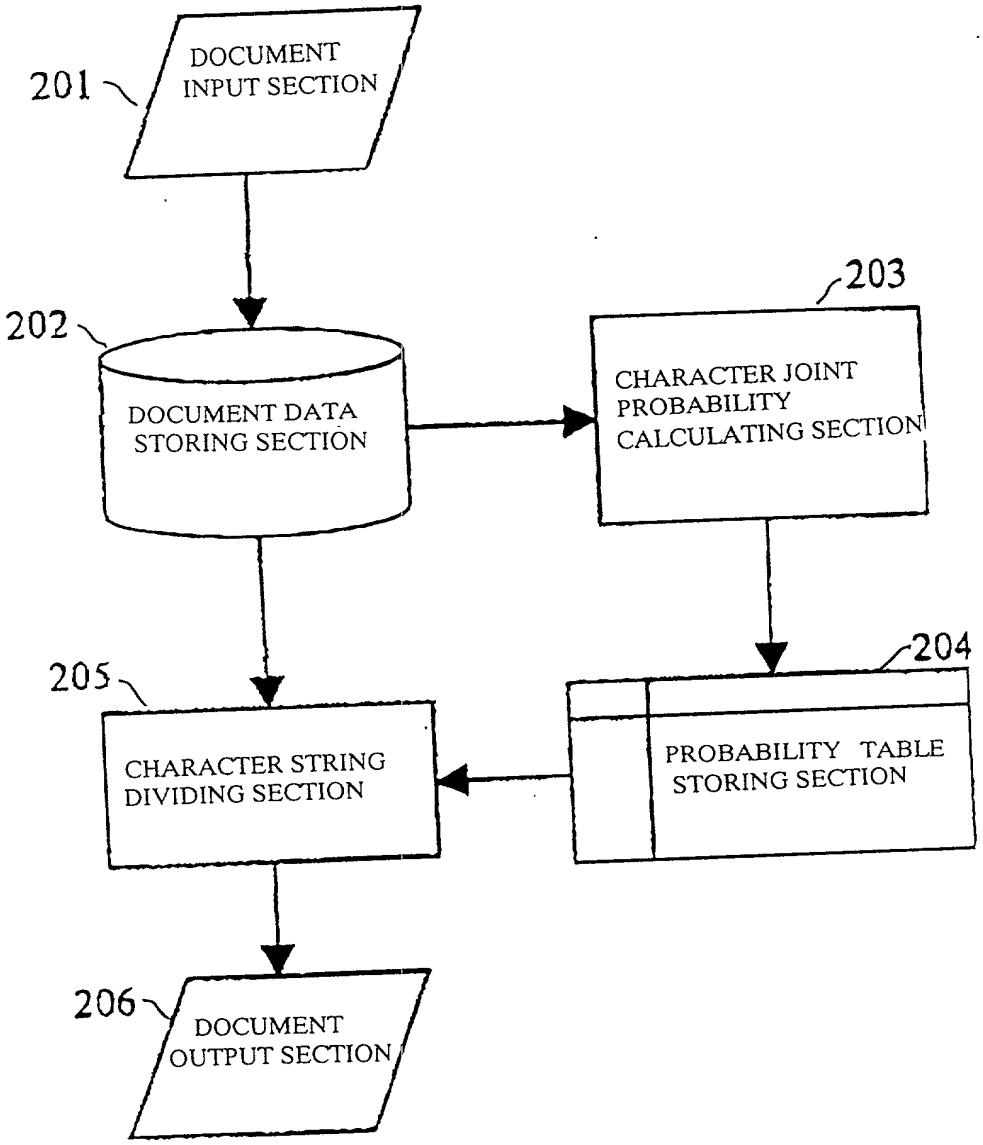

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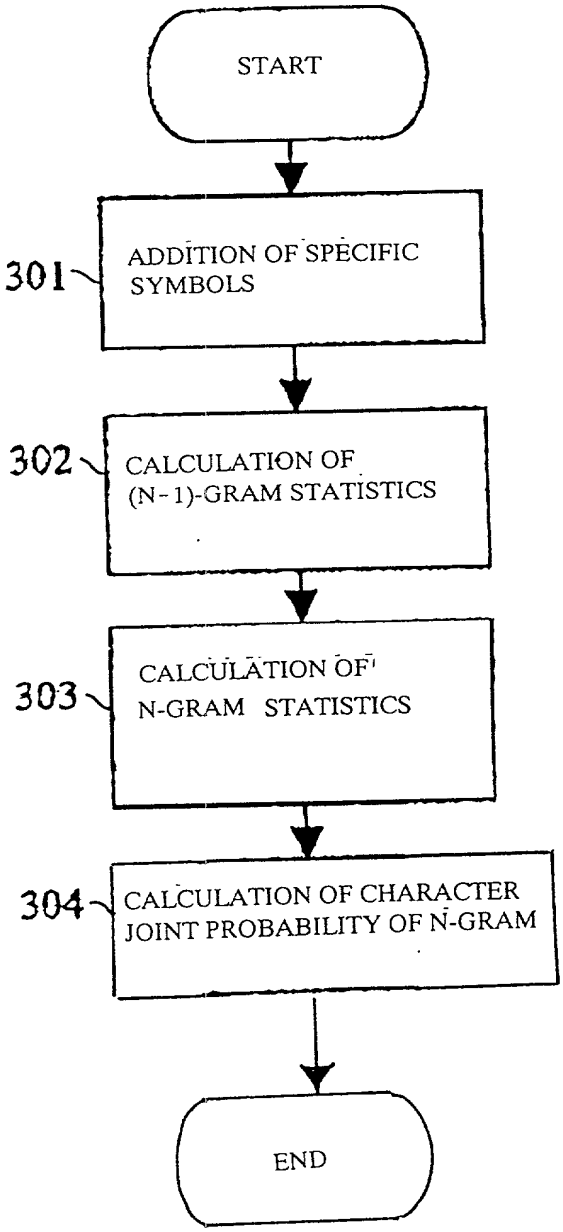
FIG. 3



09/945,956 - 082604

FIG. 4A

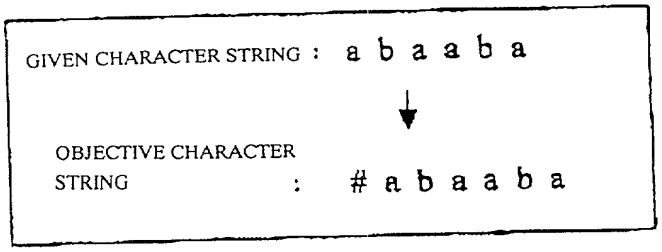


FIG. 4B

APPEARANCE FREQUENCY OF 2-GRAM	
CHARACTER STRING	NUMBER OF TIMES
#a	1
ab	2
ba	2
aa	1

FIG. 4C

APPEARANCE FREQUENCY OF 3-GRAM	
CHARACTER STRING	NUMBER OF TIMES
#ab	1
aba	2
baa	1
aab	1

FIG. 4D

CHARACTER JOINT PROBABILITY		
CHARACTER STRING	PROBABILITY	CALCULATION METHOD
#ab	1.0	= Count(#ab)/Count(#a)
aba	1.0	= Count(aba)/Count(ab)
baa	0.5	= Count(baa)/Count(ba)
aab	1.0	= Count(aab)/Count(aa)

FIG. 4E

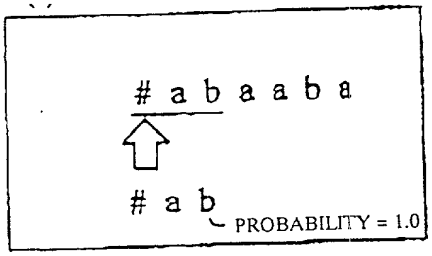


FIG. 4F

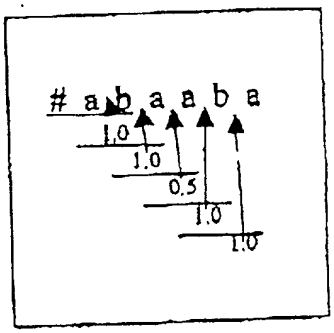


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FIG. 5

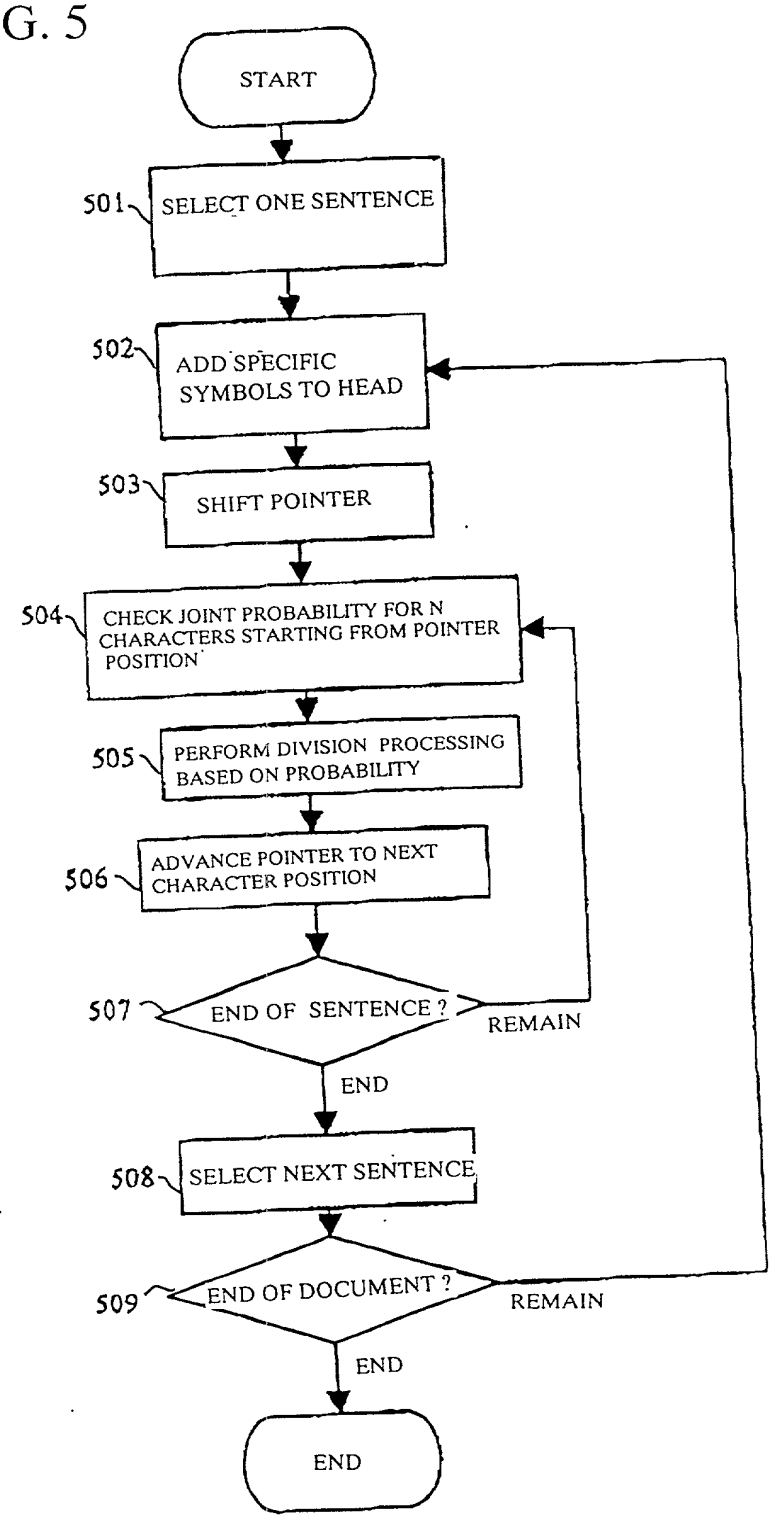

START
501
SELECT ONE SENTENCE
502
ADD SPECIFIC SYMBOLS TO HEAD
503
SHIFT POINTER
504
CHECK JOINT PROBABILITY FOR N CHARACTERS STARTING FROM POINTER POSITION
505
PERFORM DIVISION PROCESSING BASED ON PROBABILITY
506
ADVANCE POINTER TO NEXT CHARACTER POSITION
507
END OF SENTENCE ?
REMAIN
END
508
SELECT NEXT SENTENCE
509
END OF DOCUMENT ?
REMAIN
END
END

FIG. 6A

GIVEN CHARACTER STRING : にわにわにわ

↓

OBJECTIVE CHARACTER STRING : #にわにわにわ

FIG. 6B

APPEARANCE FREQUENCY OF 2-GRAM	
CHARACTER STRING	NUMBER OF TIMES
#に	1
にわ	3
わに	2

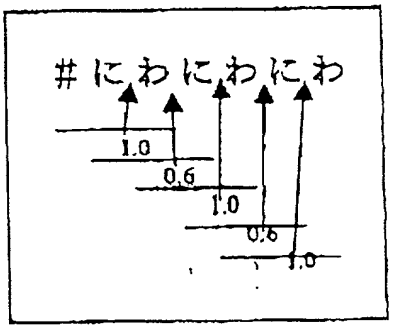
FIG. 6C

APPEARANCE FREQUENCY OF 3-GRAM	
CHARACTER STRING	NUMBER OF TIMES
#にわ	1
にわに	2
わにわ	2

FIG. 6D

CHARACTER JOINT PROBABILITY		
CHARACTER STRING	PROBABILITY	CALCULATION METHOD
#にわ	1.0	=Count(#にわ)/Count(#に)
にわに	0.6	=Count(にわに)/Count(にわ)
わにわ	1.0	=Count(わにわ)/Count(わに)

FIG. 6E



09/745,935 - 12/26/00

FIG. 7

CHARACTER JOINT PROBABILITY	
CHARACTER STRING	PROBABILITY
ようち	0.00016
ようっ	0.00011
ようつ	0.00005
ようて	0.00011
ようで	0.01938
ようと	0.08398
ような	0.13665
ように	0.22713
よくあ	0.01593
よくい	0.00612
よくえ	0.00024
よくお	0.00269
よくか	0.00171

0956456 .1220603

FIG. 8

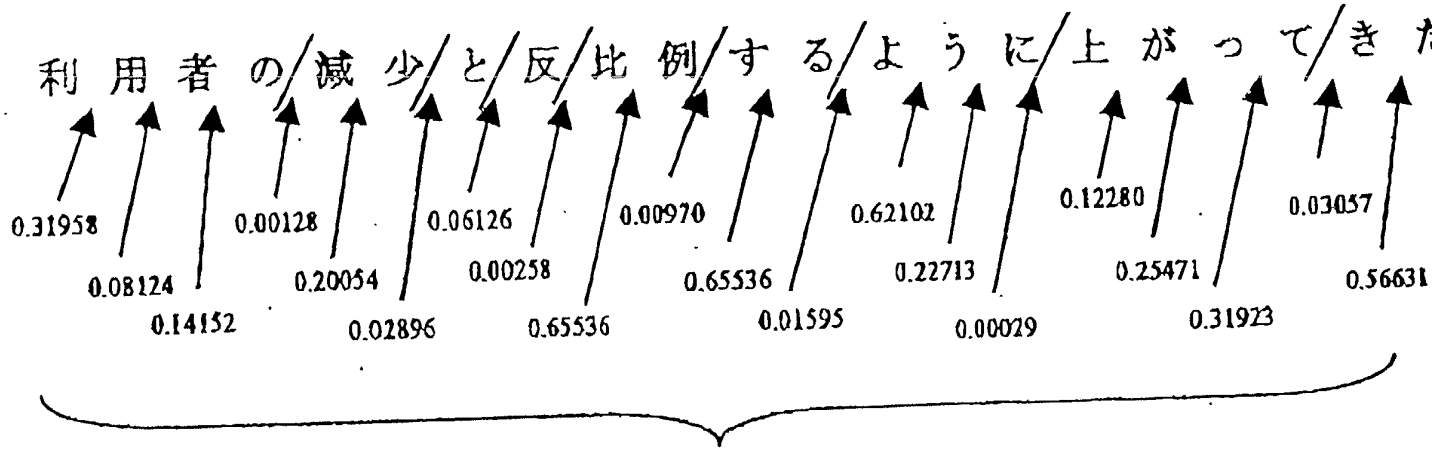
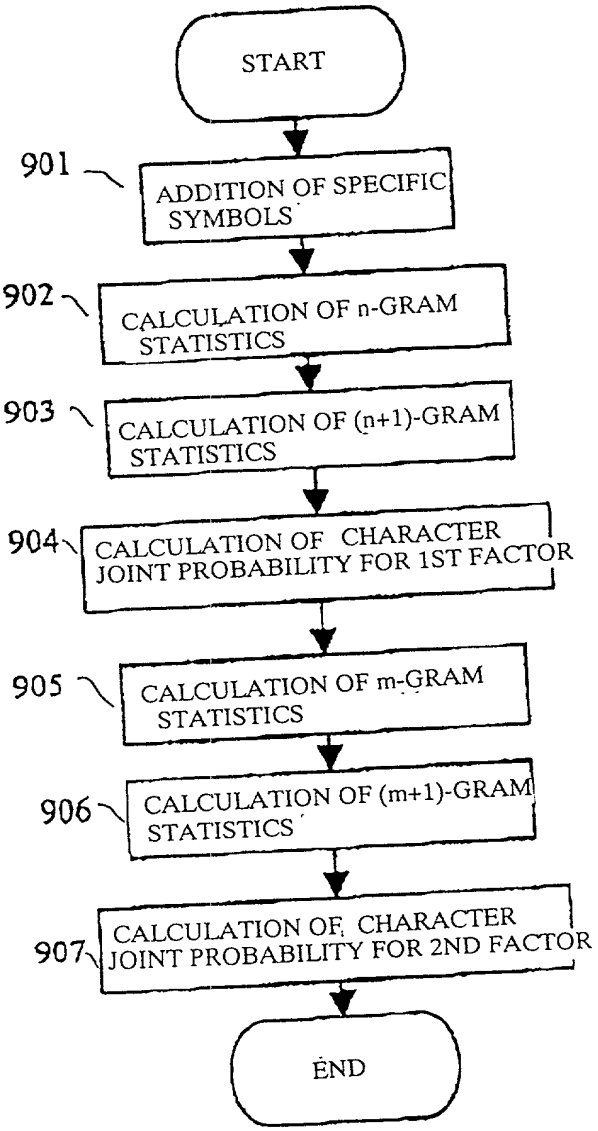

利 用 者 の/減 少/と/反/比 例/す る/よ う に/上 が っ て/き た
0.31958
0.08124
0.14152
0.00128
0.20054
0.02896
0.06126
0.00258
0.65536
0.00970
0.65536
0.01595
0.62102
0.22713
0.00029
0.12280
0.25471
0.31923
0.03057
0.56631

FIG. 9



0974565 · 1126000

FIG. 10

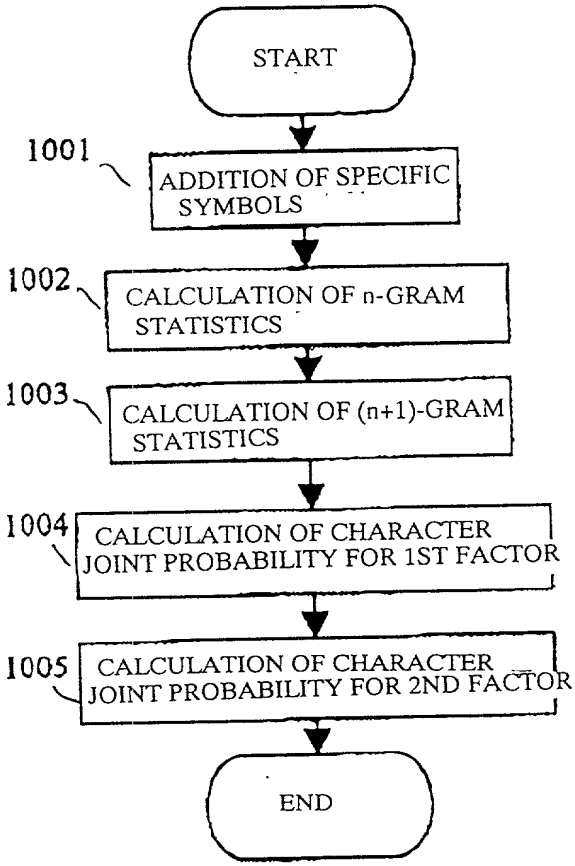


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FIG. 12A

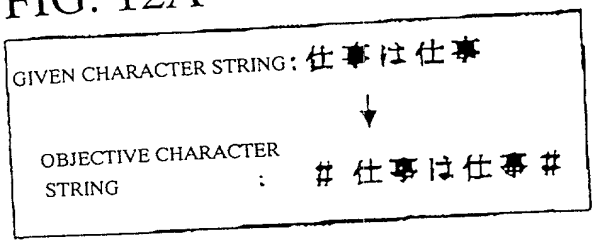


FIG. 12B

APPEARANCE FREQUENCY OF 2-GRAM

CHARACTER STRING	NUMBER OF TIMES
#仕	1
仕事	2
事は	1
は仕	1
事#	1

FIG. 12D

CHARACTER JOINT PROBABILITY

CHARACTER STRING	1ST PROBABILITY	2ND PROBABILITY
#仕事	1.0	0.5
仕事は	0.5	1.0
事は仕	1.0	1.0
は仕事	1.0	0.5
仕事#	0.5	1.0

FIG. 12C

APPEARANCE FREQUENCY OF 3-GRAM

CHARACTER STRING	NUMBER OF TIMES
#仕事	1
仕事は	1
事は仕	1
は仕事	1
仕事#	1

FIG. 12E

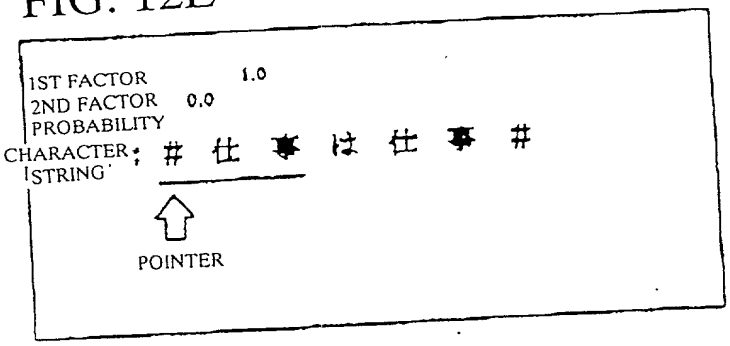


FIG. 12F

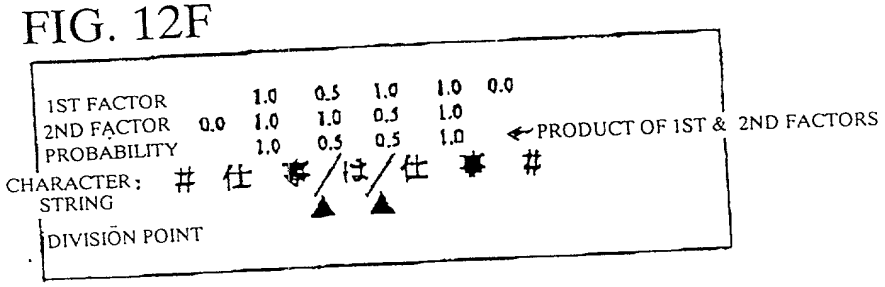


FIG. 13

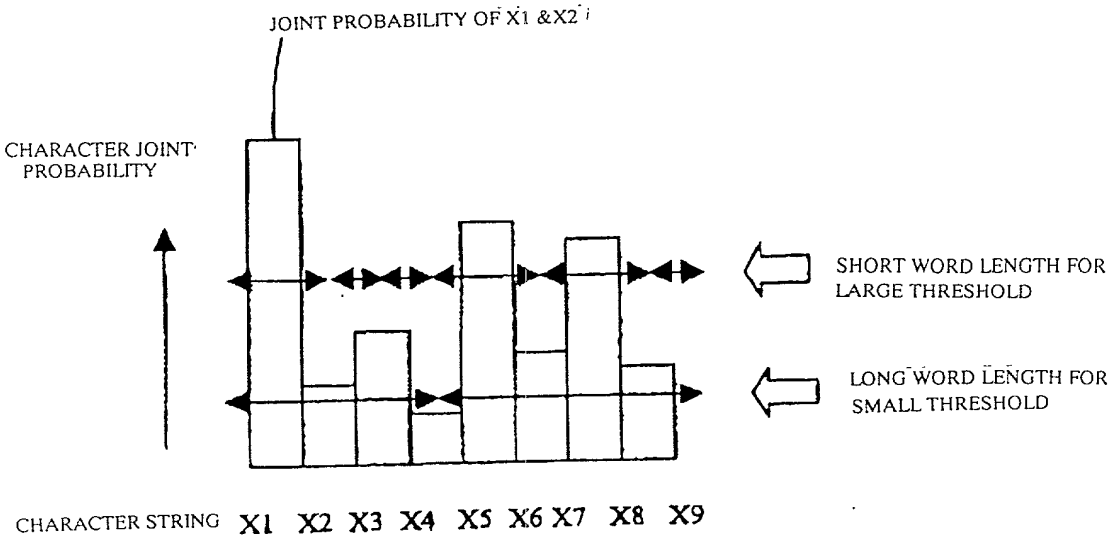

JOINT PROBABILITY OF X1 &X2
CHARACTER JOINT PROBABILITY
SHORT WORD LENGTH FOR LARGE THRESHOLD
LONG WORD LENGTH FOR SMALL THRESHOLD
CHARACTER STRING X1 X2 X3 X4 X5 X6 X7 X8 X9

FIG. 14

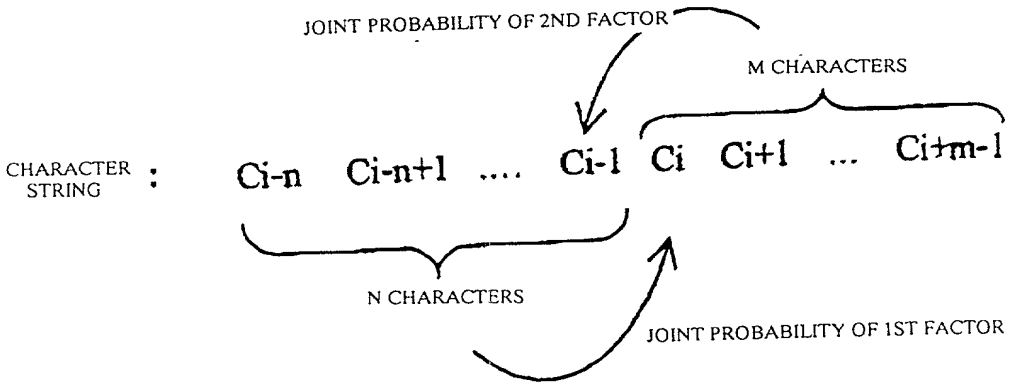
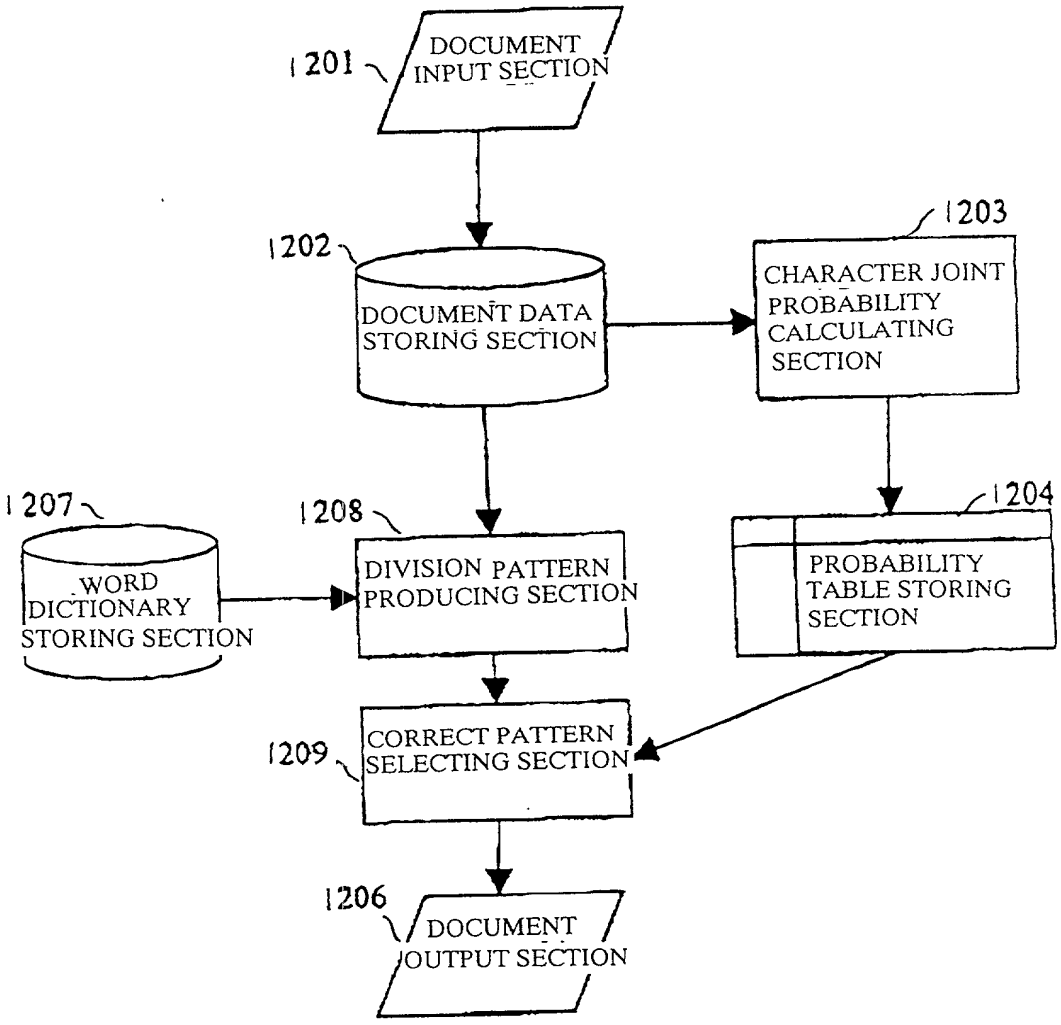

JOINT PROBABILITY OF 2ND FACTOR
M CHARACTERS
CHARACTER STRING :
Ci-n Ci-n+1 .... Ci-1 Ci Ci+1 ... Ci+m-1
N CHARACTERS
JOINT PROBABILITY OF 1ST FACTOR

FIG. 15



US 6,345,265 B1

FIG. 16

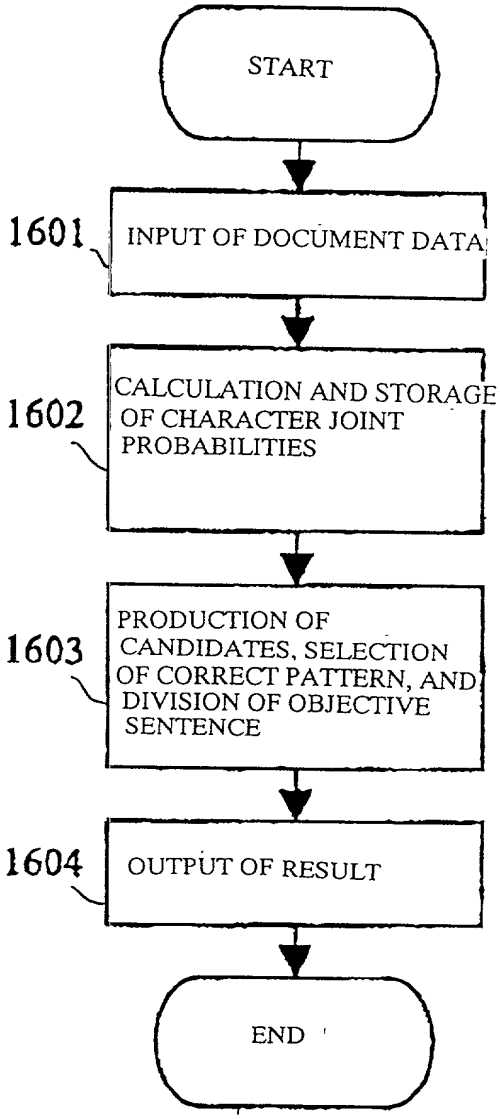


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FIG. 17A

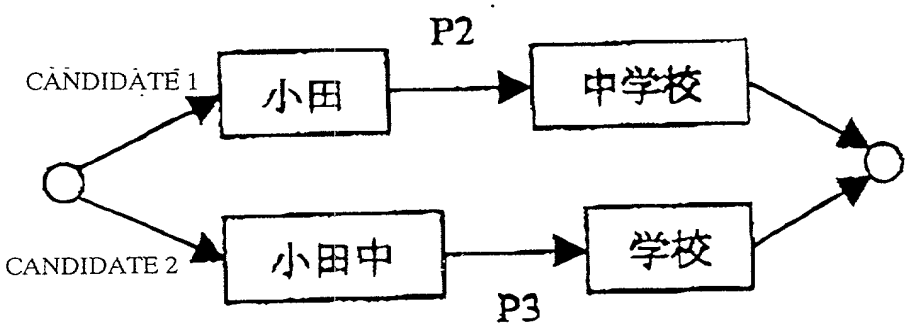

FIG. 17B

小	>	P1 = 0.019
田	>	P2 = 0.007
中	>	P3 = 0.088
学	>	P4 = 0.439
校		

09745966 .122600

FIG. 18A

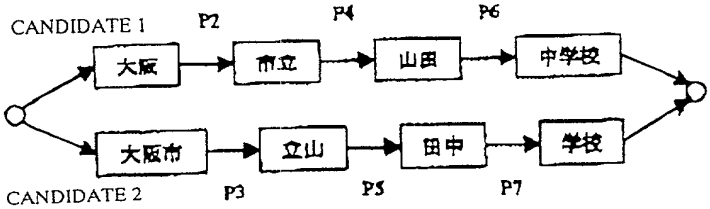

FIG. 18B

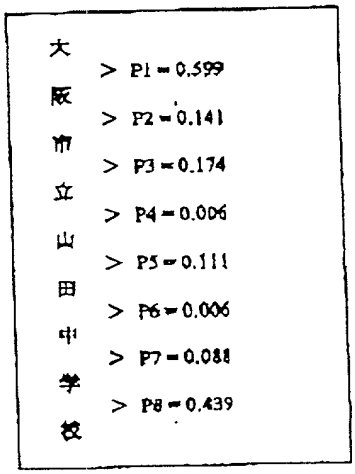

FIG. 18C

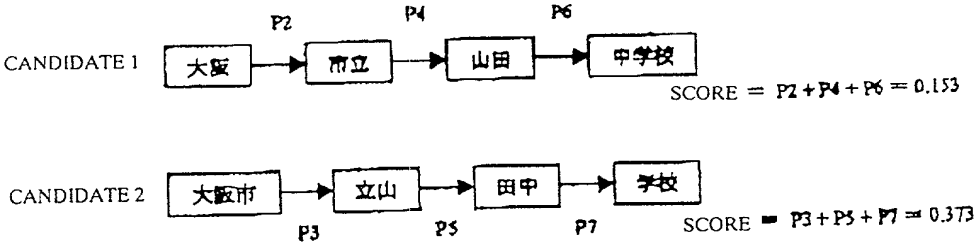

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FIG. 19

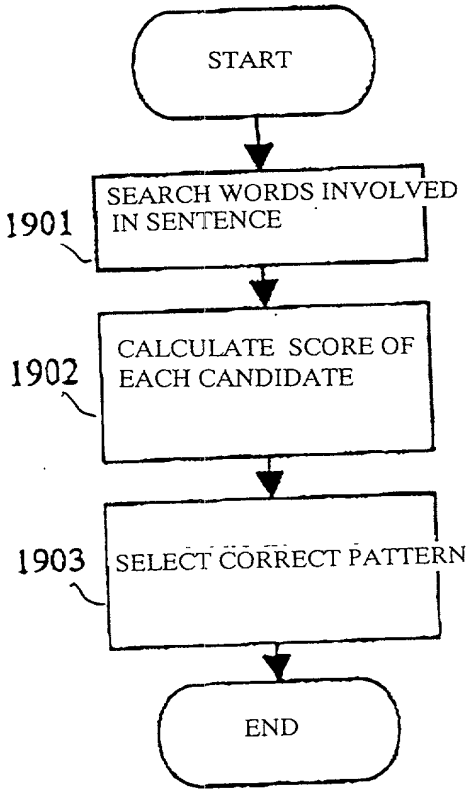
START
SEARCH WORDS INVOLVED IN SENTENCE
1901
CALCULATE SCORE OF EACH CANDIDATE
1902
SELECT CORRECT PATTERN
1903
END

FIG. 20

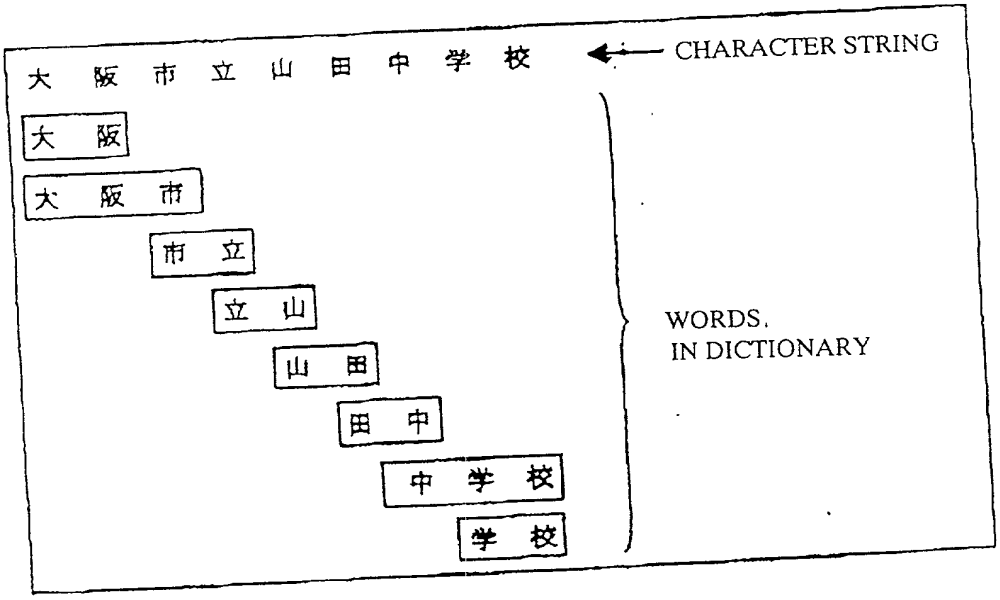
大 阪 市 立 山 田 中 学 校
CHARACTER STRING
大 阪
大 阪 市
市 立
立 山
山 田
田 中
中 学 校
学 校
WORDS IN DICTIONARY

FIG. 21

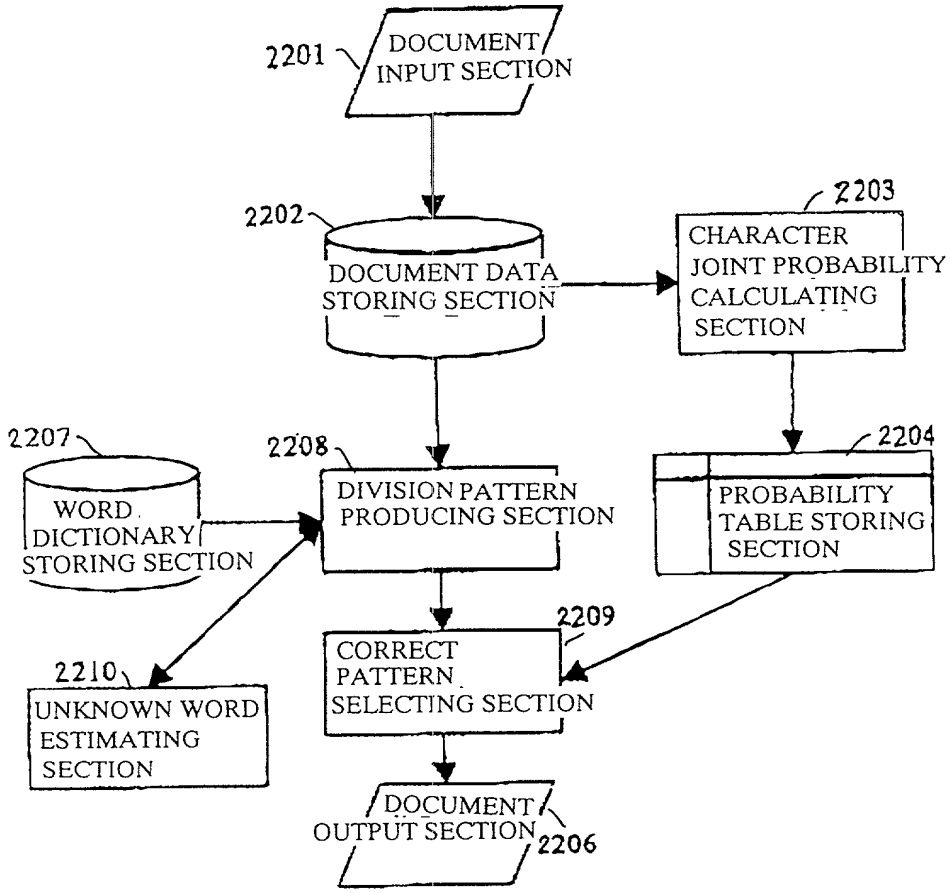

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FIG. 22

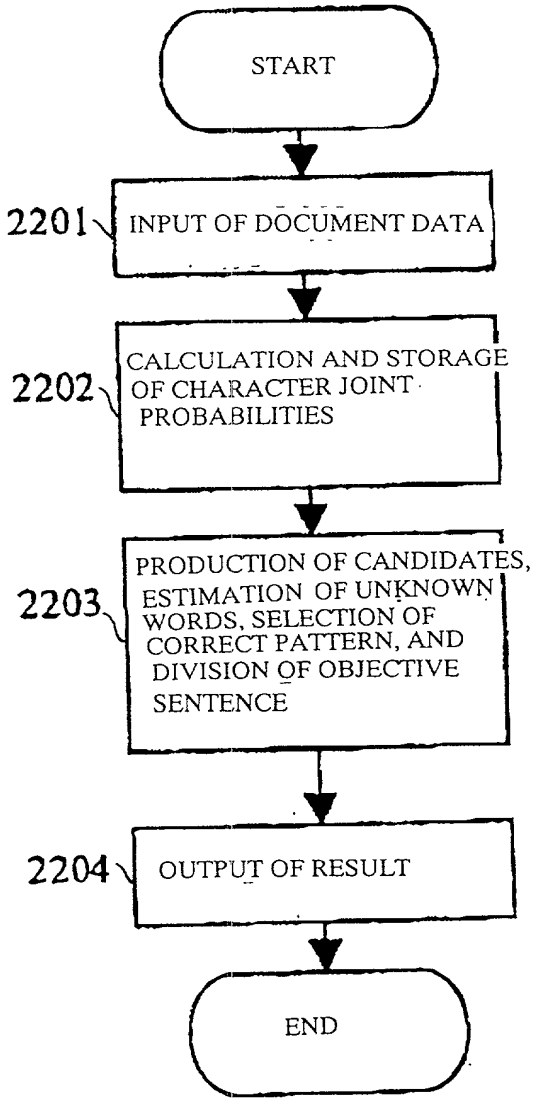

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FIG. 24

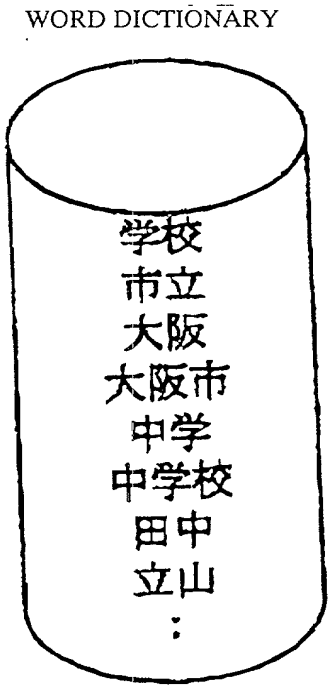

WORD DICTIONARY
学校
市立
大阪
大阪市
中学
中学校
田中
立山
:

FIG. 26

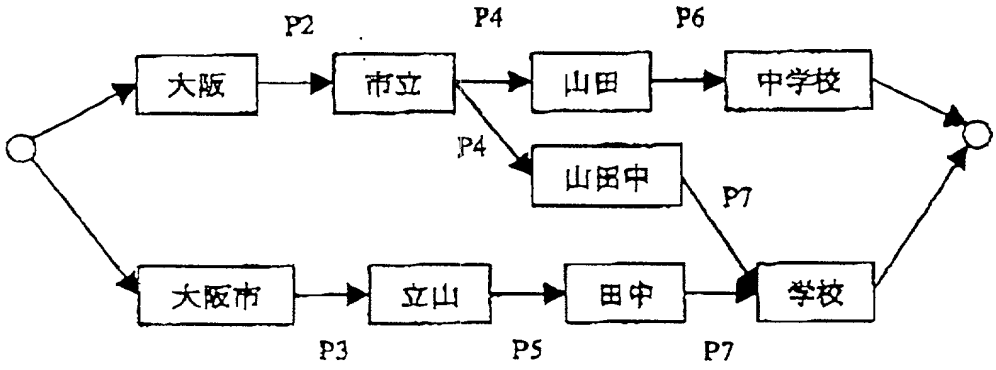

P2
P4
P6
大阪
市立
山田
中学校
P4
山田中
P7
大阪市
立山
田中
学校
P3
P5
P7

FIG. 25A

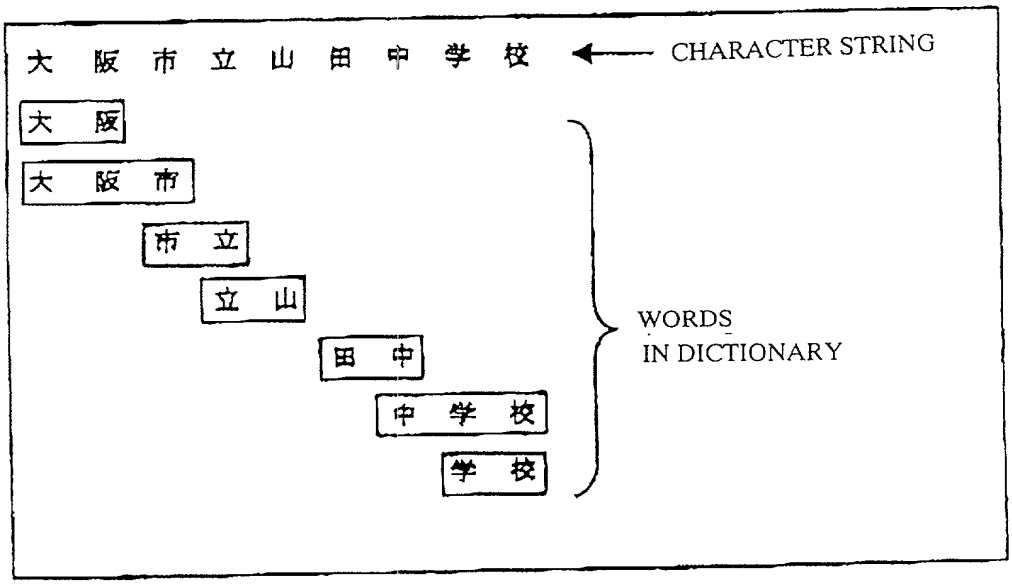
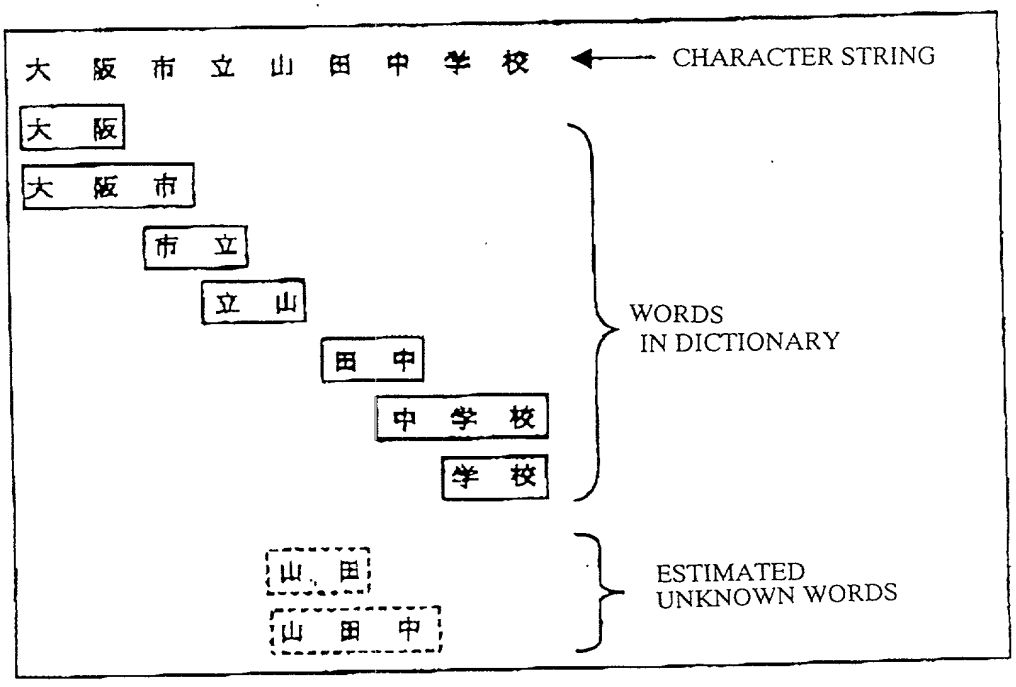
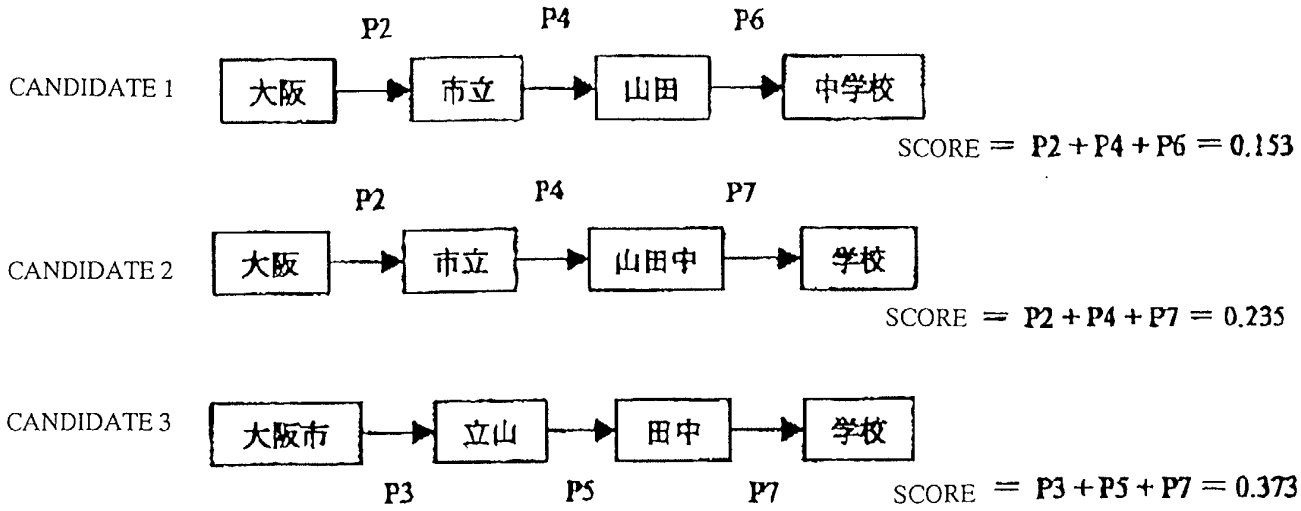


FIG. 25B



05/26/05, EAST Version: 2.0.1.4

FIG. 27


CANDIDATE 1
P2
P4
P6
大阪
市立
山田
中学校
SCORE = P2 + P4 + P6 = 0.153
CANDIDATE 2
P2
P4
P7
大阪
市立
山田中
学校
SCORE = P2 + P4 + P7 = 0.235
CANDIDATE 3
大阪市
立山
田中
学校
P3
P5
P7
SCORE = P3 + P5 + P7 = 0.373